stabilizer, said ammonium nitrate, said surfactant, and said phase stabilizer being soluble in said inert liquid;

atomizing the solution to form a stream of droplets;

freeze-drying the droplets to form agglomerates of crystals of phase stabilized ammonium nitrate, the crystals of phase stabilized ammonium nitrate in the agglomerates being coated with a film comprising the surfactant; and

disintegrating the agglomerates into separated free-flowing phase stabilized ammonium nitrate crystals coated with a film comprising a surfactant.

Please cancel claims 10 and 14.

Please add new claims 15-20 as follows:

15. A process for preparing a free-flowing, phase-stabilized ammonium nitrate, said process comprising the following steps:

preparing a solution of ammonium nitrate, a surfactant, an inert liquid, and an ammonium nitrate phase stabilizer, said ammonium nitrate, said surfactant, and said phase stabilizer being soluble in said inert liquid;

atomizing the solution to form a stream of droplets;

freezing said stream of droplets by contacting said stream of droplets with a surface of a drum, said surface being maintained at temperature below the freezing point of said solution;

sublimating the frozen droplets to remove the inert liquid from the frozen droplets and form agglomerates of the phase stabilized ammonium nitrate; and

disintegrating the agglomerates into separated free-flowing phase stabilized ammonium nitrate crystals coated with a film comprising the surfactant.

16. The process of claim 15 wherein the inert liquid is water.

17. The process of claim 15 wherein the surfactant is a polyvinyl pyrrolidone.

18. The process of claim 15 wherein the phase stabilized ammonium nitrate crystals have an average diameter of about 1μm to about 20μm.

19. The process of claim 15 wherein the amount of surfactant in the solution is from about 0.01% to about 0.15% based upon the combined weight of the ammonium nitrate and the surfactant.

20. The process of claim 15 wherein the phase stabilizer comprises potassium nitrate.